

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (previously amended) A method comprising a receiving device performing the steps of:

receiving a multi-carrier signal comprising a plurality of sub-channels, wherein each sub-channel of the plurality of sub-channels occupies a discrete frequency band;

operating in a first decoding mode to decode one or more sub-channels of the plurality of sub-channels, thereby yielding control information; and

if the control information includes indicia of payload directed to the receiving device, operating in a second decoding mode to decode one or more additional sub-channels of the plurality of sub-channels; thereby yielding payload information.

2. (previously amended) The method of claim 1, wherein in the first decoding mode, the receiving device decodes the one or more sub-channels of the plurality of sub-channels, thereby further yielding payload information.

3. (previously amended) The method of claim 1, wherein in the first decoding mode, the receiving device decodes only the one or more sub-channels of the plurality of sub-channels which yield control information.

4. (previously amended) The method of claim 3, wherein in the second decoding mode, the receiving device decodes the one or more sub-channels of the plurality of sub-channels which yields control information and the one or more additional sub-channels of the plurality of sub-channels which yield payload information.

5. (previously amended) A method comprising a sending device performing the steps of:
transmitting a multi-carrier signal comprising M sub-channels spanning a bandwidth B_M ,
wherein each sub-channel of the M sub-channels occupies a discrete frequency band; and
transmitting control information in one or more control sub-channels of the M sub-channels occupying a first portion of the bandwidth B_M .

6. (previously amended) The method of claim 5, wherein the sending device is a base station and a receiving device is a radio communication unit.

7. (previously amended) The method of claim 5, further comprising:
decoding, by a receiving device, the control sub-channels to receive the control information.

8. (original) The method of claim 7, wherein the step of decoding the control sub-channels comprises the receiving device decoding only the control sub-channels.

9. (previously amended) The method of claim 5, further comprising, upon the sending device having payload information directed to a receiving device:
sending the payload information to the receiving device in one or more payload sub-channels of the M sub-channels occupying a second portion of the bandwidth B_M .

10. (original) The method of claim 9, further comprising:
decoding, by the receiving device, the payload sub-channels to receive the payload information.

11. (original) The method of claim 10, wherein the step of decoding the payload sub-channels comprises the receiving device decoding the full bandwidth B_M .

12. (previously amended) The method of claim 9 wherein, prior to sending the payload information, the sending device performs the steps of:

sending, via the control sub-channels, a message informing the receiving device to decode at least the one or more payload sub-channels to receive the payload information.

13. (previously amended) The method of claim 5, further comprising, upon the sending device having payload information directed to a receiving device:

determining, by the sending device, if the payload information can be communicated via the control sub-channels; and

if the payload information can be communicated via the control sub-channels, sending the payload information to the receiving device via the one or more control sub-channels.

14. (original) The method of claim 13, further comprising:

decoding, by the receiving device, the control sub-channels to receive the payload information.

15. (original) The method of claim 14, wherein the step of decoding the control sub-channels comprises the receiving device decoding only the control sub-channels.

16. (original) The method of claim 13, comprising, if the payload information can not be communicated via the control sub-channels,

sending the payload information to the receiving device in one or more payload sub-channels of the M sub-channels occupying a second portion of the bandwidth B_M .

17. (original) The method of claim 16, further comprising:

decoding, by the receiving device, the payload sub-channels to receive the payload information.

18. (original) The method of claim 17, wherein the step of decoding the payload sub-channels comprises the receiving device decoding the full bandwidth B_M .

19. (previously amended) The method of claim 16 wherein, prior to sending the payload information, the sending device performs the steps of:

sending, via the control sub-channels, a message informing the receiving device to decode the one or more payload sub-channels to receive the payload information.

20. (previously amended) A communication device comprising:
an antenna for receiving a multi-carrier signal comprising M sub-channels, wherein each sub-channel of the M sub-channels occupies a discrete frequency band; and
a decoding element for independently decoding each of the M sub-channels, the decoding element being operable in a first decoding mode to decode one or more control sub-channels of the M sub-channels and in a second decoding mode to decode one or more payload sub-channels of the M sub-channels.

21. (original) The communication device of claim 20, wherein in the first decoding mode, the decoding element decodes only the control sub-channels.

22. (original) The communication device of claim 20, wherein in the second decoding mode, the decoding element decodes the control sub-channels and the payload sub-channels.